MULTIMEDIA **UNIVERSITY**

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FINAL EXAMINATION

TRIMESTER 2, 2018/2019

BCE2034 – PROJECT CYCLE AND EVALUATION
(All sections / Groups)

14 MARCH 2019
9.00 a.m. – 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **NINE (9)** printed pages (including the cover page) with:
   Section A: Twenty (20) multiple choice questions (40%)
   Section B: Three (3) structured questions (60%)

2. Shade all answers to **Section A** in the multiple-choice answer sheet provided and **Section B** in the answer booklet provided (including tables and graphs).

3. Marks are shown at the end of each question.

SECTION A: MULTIPLE CHOICE QUESTIONS (40 MARKS)

1. Which of these is NOT one of the constraints of a project?
   A. Scope
   B. Resources
   C. Team
   D. Budget

2. When considering the following activities, which is the best example of a project?
   A. Processing insurance claims.
   B. Producing automobiles.
   C. Writing a policy manual.
   D. Monitoring a product quality.

3. In the .... stage of the project life cycle, project objectives are established, teams are formed, and major responsibilities are assigned.
   A. identifying
   B. defining
   C. planning
   D. executing

4. Project management is
   A. just like any other kind of management.
   B. a job that should only be undertaken by technical staff.
   C. the planning and controlling of resources for a specific time to achieve a determined goal.
   D. low cost.

5. Projects can fail because
   A. the project is planned in too much detail.
   B. the project is not controlled closely.
   C. stakeholder requirements are too specific.
   D. project risks are identified too early in the project.

6. Your company does not have any prior sales data and you have very little time to set a forecast for your organization. Which forecasting method would be most ideal?
   A. Jury of executive opinion
   B. Moving averages
   C. Survey of buyer intentions
   D. Exponential smoothing

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7. **Table 1** below shows the actual and forecast sales from period 1 until period 6.

Table 1

Time (period)	Actual sales (units)	Forecast sales (units)
1	2000	2100
2	2100	2200
3	2150	2250
4	2300	2350
5	2400	2450
6	2700	2600

Based on the data in **Table 1**, find the forecast sales for period 7 using the moving average method over 5 averaging periods.
   A. 2,190 units
   B. 2,270 units
   C. 2,330 units
   D. 2,370 units

8. When choosing the best sales forecasting method, the most important consideration would be
   A. the type of method your top competitor is using.
   B. the amount, quality, and stability of the data available.
   C. you have at least 10 years or more worth of data sales.
   D. the risk tolerance of the senior management team.

9. In assessing the appropriateness of technology, the following questions are to be evaluated except
   A. does the technology utilize local raw materials?
   B. does the technology protect ecological balance?
   C. is the technology the best in the industry?
   D. is the technology harmonious with social and cultural conditions?

10. The purpose of mitigation is
   A. to find a way to do things in a better way.
   B. to restore social and environmental benefits.
   C. to prevent, minimize and remediate the negative impacts.
   D. all of the above are correct.

11. Which of the following is an example of avoiding risk?
    A. Decision to use a conventional technology rather than the advanced state-of-the-art technology in a new product.
    B. Raising of homes in flood-prone areas.
    C. Adopting and enforcement of land use and zoning practices.
    D. Moving a company's operation to an area where earthquakes are more prevalent than other parts of the world.

12. Mr. Smith deposited RM40,000 in a bank and earned simple interest at 7% per annum for two years. Calculate the interest earned at the end of the period.
    A. RM4,000
    B. RM2,800
    C. RM3,400
    D. RM5,600

13. In meeting the cost of a project, means of finance could be obtained from all of the following except
    A. personal loan.
    B. share capital.
    C. deferred credit.
    D. terms loans.

14. What is a risk-free rate?
    A. Return on a security that is free from default risk and is uncorrelated with returns from anything else in the economy.
    B. The difference between the expected market return and the actual market return.
    C. The difference between the average return on stocks and the average risk-free rate earned in the past.
    D. Return on a security that is free from high interest rate.

15. Risk management is a responsibility of the
    A. customer.
    B. investor.
    C. developer.
    D. project team.

16. The main goal of risk assessment is to inform management at all levels about risks facing an organization, and how those risks affect the organization's ability to
    A. increase productivity.
    B. meet objectives.
    C. increase profitability.
    D. have fewer losses.

Continued...

17. Mr. Wong is the Project Manager of a road construction project. During a project review, he realizes that one particular risk has occurred. To take appropriate action against risk that has happened, Mr. Wong needs to refer to the .... document.
    A. risk response plan
    B. risk management plan
    C. risk breakdown structure
    D. risk register

18. Amount of money today which is equal to series of payments in the future is known as
    A. nominal value of annuity.
    B. sinking value of annuity.
    C. present value of annuity.
    D. future value of annuity.

19. A project would normally be undertaken if its net present value is
    A. zero.
    B. positive.
    C. negative.
    D. the same as the net present value of existing projects.

20. The cash inflows and outflows associated with a project are as shown in **Table 2** below.

Table 2

	RM
At start	(120,000)
Year 1	40,000
Year 2	50,000
Year 3	60,000
Residual value of project at the end of 3 years	20,000

The payback period for this project would be
    A. 2 years.
    B. 2 years and 3 months.
    C. 2 years and 6 months.
    D. 3 years.

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SECTION B: STRUCTURED QUESTIONS (60 MARKS)

Question 1 (20 marks)

Article 1

Drilling in Ecuador

The pollution is worse every day. Everyone has a cough or other sickness.
--Gabriel Alatorre, Petroecuador mechanic in Shushufindi, Ecuador (Althaus, 1996)

The Ecuadorean Amazon, known as the Oriente, was once one of the riches ecological and sparsely populated sites in the world. When oil was discovered there is 1967, the situation changed dramatically. Extremely high levels of water pollution of drinking, and fishing waters in the Oriente have been attributed to contamination from unlined waste pits (Brooke, 1994). More than 600 of these toxic waste pits were created during Texaco's involvement in Ecuador between 1972 and 1990 (Kane, 1996). Texaco used such pits set into the ground to store toxic byproducts from oil production and separation. The lack of barriers allowed waste to leak into the surrounding soil. Ecuador's Undersecretary for the Environment, Jorge Alban, reports that Texaco, while having cleaned 268 waste pits, has not cleaned at least 400 pits and these are not included in the cleanup plan signed by Texaco, Petroecuador and the Ecuadorean government (Schemo, 1998).

Oil pollution in local water supplies vastly exceeds international standards. According to the EPA, the level of polycyclic aromatic hydrocarbons (PAHs) deemed acceptable in water is zero, as they are strong carcinogens. The EPA standard in the U.S. is for a maximum PAH concentration of 28 nanograms per liter of water, corresponding to a one in 100,000 lifetime risk of cancer. Samples of drinking water collected near oil production facilities in the Oriente ranged from 33 to 2,793 nanograms of PAHs per liter of water – counts up to one hundred times the EPA's safety guidelines. Bathing and fishing waters had concentrations ranging from 40 to 1,486 nanograms per liter, and water from waste pits ranged from 46,500 to 405,634 nanograms per liter (Brooke, 1994).

Ecuador's debt has created a dependency upon oil that has pressured the government into two compromising policies: to accept substandard operational practices by oil companies and to open ecologically-sensitive areas to exploration and production, disregarding the effect on indigenous populations. Neither action involved consideration of indigenous groups that have lived in the Oriente for centuries, and rarely were indigenous groups informed of oil production or settlement plans. The Ecuadorean government has estimated the cost of environmental damage to be $5 billion and has asked Texaco for reparations for cleanup costs in the region (Parrish and Long, 1994).

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(a) The oil company Texaco has caused some impacts in the Amazonian Territory (**Article 1**). Identify and elaborate on **TWO (2)** potential environmental impacts and **TWO (2)** potential social impacts of this company's activities.

(8 marks)

(b) The Social Impact Assessment (SIA) is based on scientific research concepts and methods. Elaborate on **THREE (3)** characteristics of these research methods to ensure that outcomes are reliable and accurate.

(6 marks)

(c) There are many key environmental concerns under the Environmental Impact Analysis (EIA). Provide any **TWO (2)** types of environmental concerns in general with an example for each one of them.

(6 marks)

Question 2 (20 marks)

Article 2

The management of Abu Electronics Company is considering to purchase an equipment to be attached with the main manufacturing machine. The equipment will cost RM6,000 and will increase annual cash inflow by RM2,200. The useful life of the equipment is 6 years. After 6 years it will have no salvage value. The management wants a 20% return on all investments.

(a) Based on **Article 2**, compute the net present value (NPV) of this investment project.

(4 marks)

(b) According to the NPV analysis, should the equipment be purchased? Explain.

(6 marks)

(c) Identify and elaborate on **THREE (3)** properties of the NPV rule.

(6 marks)

(d) Elaborate on **TWO (2)** advantages of the NPV method.

(4 marks)

Continued...

Question 3 (20 marks)

(a) What is a risk?

(2 marks)

(b) Provide **THREE (3)** examples of specific risks.

(9 marks)

(c) Why is historical data from prior similar projects could be helpful in assessing risks?

(2 marks)

(d) Explain the purpose of having a risk response plan.

(2 marks)

(e) Explain **TWO (2)** ways to monitor risks.

(5 marks)

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Formula Sheet

1. $P_0 = \sum_{t=1}^{n} \dfrac{I}{(1+r_D)^t} + \dfrac{F}{(1+r_D)^t}$

2. $r_D = \dfrac{I + (F - P_0)/n}{0.6P_0 + 0.4F}$

3. $\beta_i = \dfrac{Cov(R_i, R_M)}{\sigma_{M^2}}$

4. $Cov(R_i, R_M) = \dfrac{\sum (Ri - \bar{R}i)(R_M - \bar{R}_M)}{n-1}$

5. $\sigma_{M^2} = \dfrac{\sum (R_M - \bar{R}_M)}{n-1}$

6. $FV_n = PV(1+r)^n$

7. $PV = FV_n \left[\dfrac{1}{(1+r)^n} \right]$

8. $FVA_n = A\left[(1+r)^n - 1\right]/r$

9. $PVA = A\left[\left\{1 - (1+r)^{-n}\right\}/r\right]$

10. $NPV = \sum_{t=1}^{n} \dfrac{C_t}{(1+r)^t}$

11. $BCR = \dfrac{PVB}{I}$

12. $NBCR = \dfrac{PVB - I}{I}$

13. $ARR = \dfrac{\text{Profit after tax}}{\text{Book value of the investment}}$

14. $n_t = pN + (q - p)N_{t-1} + \left(\dfrac{q}{N}\right) * (N_{t-1})^2$

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